

LISTING OF CLAIMS

1. (currently amended) A solid freeform fabrication system for producing a three-dimensional object with embedded features, comprising:

build material configured to be deposited in layers to form a three-dimensional object; and

support material configured to be deposited adjacent to the build material for supporting the build material during formation of the three-dimensional object, said support material also being configured to form a feature that imparts a predetermined property, other than support, within the three-dimensional object.

2. (original) A system as in claim 1, wherein the build material is a liquid that is configured to be deposited in layers using an ink-jet printhead.

3. (original) A system as in claim 2, wherein the build material is UV curable.

4. (original) A system as in claim 1, wherein the feature is within a cavity defined at least in part by the build material.

5. (original) A system as in claim 4, wherein the cavity is a closed cavity that is completely defined by build material.

6. (original) A system as in claim 4, wherein the cavity is an open cavity that is partially defined by the build material and is partially open to a surface of the three-dimensional object.

7. (original) A system as in claim 1, where the feature imparts color.

8. (original) A system as in claim 1, where the feature imparts conductance.

9. (original) A system as in claim 7, wherein the build material is at least partially transparent.

10. (original) A system as in claim 8, wherein the feature also includes additional build material.

11. (currently amended) A method for solid freeform fabrication of three-dimensional objects, comprising:

layering build material to form a three-dimensional object, said three-dimensional object including a cavity therein that is at least in part defined by the build material;

supporting overhangs formed during the layering step using a first portion of support material;

depositing a second portion of the support material in said cavity, wherein at least the second portion of the support material is configured to form a feature that imparts a predetermined property, other than support, within the three-dimensional object; and

removing the first portion of the support material from the three-dimensional object.

12. (original) A method as in claim 11, wherein the step of layering includes step of jetting build material to form multiple layers of build material.

13. (original) A method as in claim 12, further comprising the step of UV curing the build material after the jetting step.

14. (original) A method as in claim 11, wherein the first portion and the second portion of the support material are of the same composition.

15. (original) A method as in claim 11, further including the step of depositing build material within the cavity.

16. (original) A method as in claim 15, wherein the build material is at least partially transparent, the support material imparts a color, and the build material and the support material are both present within the cavity at a 1:99 to 99:1 build material to support material volume ratio.

17. (original) A method as in claim 11, where the feature imparts color.

18. (original) A method as in claim 11, where the feature imparts conductance.

19. (original) A method as in claim 11, further comprising the preliminary step of predetermining the location to place cavities within the three-dimensional object.

20. (original) A method as in claim 19, wherein the step of predetermining is carried out with the assistance of a computer modeling system.